



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,907	12/12/2003	Richard J. Roesgen	1759.144	2303
7590	06/13/2005		EXAMINER	
Parkhurst & Wendel, L.L.P. 1421 Prince Street Suite 210 Alexandria, VA 22314-2805			HUNTER, ALVIN A	
			ART UNIT	PAPER NUMBER
			3711	

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/734,907	ROESGEN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Alvin A. Hunter	3711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 24 May 2005.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-7 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_

**DETAILED ACTION**

***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in France on June 25, 2001. It is noted, however, that applicant has not filed a certified copy of the French application as required by 35 U.S.C. 119(b).

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims go against known common physics. Applicant is urged to submit evidence that having a smooth surface actually increases backspin.

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

See the above regarding enablement.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3711

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi (USPN 4754971) in view of Chang (USPN 6402636).

Kobayashi discloses a golf clubhead set comprising club heads having a striking face which have loft angles gradually increases, wherein the striking face has a plurality of parallel, horizontal grooves (See Summary of the Invention and Figure 2). It is believed that the means for increasing the backspin are the number of grooves of the striking face and the loft angle of the striking face. It is noted that the surface roughness decreases as the loft angle increases, but Kobayashi does not disclose the surface roughness or the hardness of the striking face. Chang discloses a metal golf club having a striking face comprising a means for increasing ball spin that includes a surface roughness of less than about 25 microinches, or 0.635 micrometers and a Rockwell C hardness of 45 to 65, equivalent to roughly about 459 to 902 Vickers or at least 5 GPa (See Column 5, lines 11 through 53). One having ordinary skill in the art would have found it obvious to have a surface roughness of less than 0.25 micrometers and a Vickers hardness of greater than 5, as taught by Chang, in order to reduce the spin imparted to a golf ball struck by the club head.

In regard to claim 2, Chang discloses the surface roughness of the striking face being less than 25 microinches, or 0.935 micrometers (See above regarding claim 1).

In regards to claim 3, Chang discloses the strike face made of tempered steel (See column 5, lines 30 through 53). The applicant defines marginal steel as being as

steel tempered in the martensitic state; therefore, it is submitted that Chang discloses the strike face made of marginal steel.

In regards to claim 6, Claim 6 does not disclose the importance of why greater than 12 GPa is more preferable for the Vickers hardness; therefore, is considered to constitute a design choice because greater than 5 achieves the same results.

3. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi (USPN 4754971) in view of Chang (USPN 6402636) further in view of Inamori (USPN 3975023).

Kobayashi in view of Chang does not disclose the striking face made of a ceramic. Inamori discloses a club head having a ceramic striking face (See Abstract). One having ordinary skill in the art would have found it obvious to have the striking face made of a ceramic, as taught by Inamori, in order to increase the flight distance of the golf ball.

In regards to claim 5, Inamori discloses the ceramic being alumina (See Column 2, lines 38 through 45).

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi (USPN 4754971) in view of Chang (USPN 6402636) further in view of Nagai et al. (USPN 5190289).

Kobayashi in view of Chang does not disclose the surface roughness decreasing along the height. Nagai et al. teaches a head and shaft having the surface roughness decrease along the height (See Column 15, lines 58 through 66). Though Nagai et al. does not teach the striking face, it teaches the concept of having the surface roughness

decreasing along the height. One having ordinary skill in the art would have found it obvious to having the surface roughness of the striking face decrease along its height, as taught by Nagai et al., in order to reduce air resistance to the golf club.

5. Claims 1-3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (USPN 6402636) in view of Kobayashi (USPN 4754971).

Chang discloses a metal golf club having a striking face comprising a means for increasing backspin which includes a surface roughness of less than about 25 microinches, or 0.635 micrometers and a Rockwell C hardness of 45 to 65, equivalent to about 459 to 902 Vickers or at least 5 GPa wherein the means is the roughened surface (See Column 5, lines 11 through 53). Chang does not disclose having a loft angle of at least 45%. Kobayashi discloses a golf clubhead set comprising club heads having a striking face which have loft angles gradually increases, wherein the striking face has a plurality of parallel, horizontal grooves (See Summary of the Invention and Figure 2). It is believed that the means for increasing or controlling the backspin are the number of grooves of the striking face and the loft angle of the striking face. It is noted that the surface roughness decreases as the loft angle increases. One having ordinary skill in the art would have found it obvious to have the loft angle of Chang be greater than 45, as taught by Kobayashi, in order to control the spin imparted to a golf ball struck by the club head.

In regard to claim 2, Chang discloses the surface roughness of the striking face being less than 25 microinches, or 0.935 micrometers (See above regarding claim 1).

Art Unit: 3711

In regards to claim 3, Chang discloses the strike face made of tempered steel (See column 5, lines 30 through 53). The applicant defines marginal steel as being as steel tempered in the martensitic state; therefore, it is submitted that Chang discloses the strike face made of marginal steel.

In regards to claim 6, Claim 6 does not discloses the importance of why greater than 12 GPa is more preferable for the Vickers hardness; therefore, is considered to constitute a design choice because greater than 5 achieves the same results.

6. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (USPN 6402636) in view of Kobayashi (USPN 4754971) further in view of Inamori (USPN 3975023).

Chang in view of Jenkins does not disclose the striking face made of a ceramic. Inamori discloses a club head having a ceramic striking face 1 (See Abstract). One having ordinary skill in the art would have found it obvious to have the striking face Chang in view of Kobayashi made of a ceramic, as taught by Inamori, in order to increase the flight distance of the golf ball.

In regards to claim 5, Inamori discloses the ceramic being alumina (See Column 2, lines 38 through 45).

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (USPN 6402636) in view of Kobayashi (USPN 4754971) further in view of Nagai et al. (USPN 5190289).

Chang in view of Kobayashi does not disclose the surface roughness decreasing along the height of the striking face. Nagai et al. teaches a head and shaft having the

surface roughness decrease along the height (See Column 15, lines 58 through 66). Though Nagai et al. does not teach the striking face, it teaches the concept of having the surface roughness decreasing along the height. One having ordinary skill in the art would have found it obvious to having the surface roughness of the striking face of Chang in view of Kobayashi decrease along its height, as taught by Nagai et al., in order to reduce air resistance to the golf club.

***Response to Arguments***

Applicant's arguments filed 5/24/2005 have been fully considered but they are not persuasive. Applicant argues that the combination does not meet the claimed invention. The examiner disagrees.

Applicant states that Chang discloses a coating over the club head. This is irrelevant to the issue. Applicant does not claim the club head excluding any coating. Therefore, argument in regards to the coating is moot.

Applicant also states that the calculated values of the Vickers hardness are erroneous in which applicant provides a calculated value thereof. The values calculated by the applicant still appear to meet the limitations of claim 1. Claim 6 does not discloses the importance of why greater than 12 GPa is more preferably, therefore, is considered to be read as being a design choice because greater than 5 achieves the same results.

For educational purposes, a few methods can be used to increase the backspin such as 1) increase the loft angle of the club face and 2) increase the friction of the club face. If the loft is increased, the golf ball stayed in contact longer during the swing

creating the backspin. The friction can be increased by enlarging the grooves of the club face, adding more grooves to the club face, or roughening the club face. A smooth surface reduces the amount of friction between the golf ball and the club head thereby reducing the backspin.

The examiner believes that the applicant has not fully disclosed all information for carrying out the invention. Having a smooth surface which increases backspin would defy what is currently known in the world of golf and physics. The applicant discloses within the specification that the grooves have a specific profile (See Page 4, lines 18 through 26). The examiner believes that either the grooves are creating the backspin in combination with the loft or that the loft alone is creating the backspin and the backspin has nothing to do with the smooth surface.

A request for information under 37 CFR 1.105 is in demand regarding the present invention on the increase in backspin, what type of groove were on the striking face, the width and depth of the grooves, types of golf balls used to test the invention and the other clubs tested by the applicant in order to show that the reduction in surface roughness is in fact increasing the backspin.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alvin A. Hunter whose telephone number is (571) 272-4411. The examiner can normally be reached on Monday through Friday from 7:30AM to 4:00PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Vidovich, can be reached on 571-272-4415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*AAH*  
Alvin A. Hunter, Jr.

*GV*  
GREGORY VIDOVICH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700